

Robertson noted only one salient character for *trifasciatum* in his brief description, namely, that the female has only three yellow crossbands on the abdomen. Not infrequently, however, there is a rudimentary band on the fifth tergite. Malloch used the color of the abdominal hairs which serves to distinguish both sexes from its nearest ally, *balyras* (Walker).

Male and female.—Facial tubercle absent; occipital pollinose line broader than width of first antennal segment; antenna bright yellow; fore femur yellow on basal half, darkened beyond except that the apex is yellow; remainder of fore legs black; mid legs bright yellow; hind femur and tibiae each with a dark preapical area, remainder of hind leg yellow; metasternum pilose; last tergite with only coarse black hairs beyond the crossband; width of the abdominal crossbands broader than apex of hind tibia.

Type locality.—Carlinville, Illinois. Also occurs in Virginia, Pennsylvania and New York.

A NEW SPECIES OF SIALIS (MEGALOPTERA, SIALIDAE) FROM KENTUCKY.

By LEE H. TOWNSEND,

College of Agriculture, University of Kentucky.

Ross¹ has recently published a taxonomic study, based on the characters furnished by the genitalia, of the nearctic species of the genus *Sialis*. These structures proved the best characters for separation of species. Ross made no attempt to homologize the parts of the genitalia but merely applied descriptive terms to them. The present writer has used the same descriptive terms. By referring to the drawings one can understand the location and relation of these parts.

Sialis nina, n. sp.

This species is in the *infumata* group having the terminal plate (fig. 2, t) produced only along the vertical axis. The male would run in Ross's key (l.c.) to the couplet with *velata* and *itasca*, but can be readily separated from these species by the convexity of the lateral plates, the different shape of the terminal plate, and the absence of a basal lobe on the genital hooks. The terminal plate is distinctly wider at the base than at apex, whereas in *velata* and *itasca* this plate is not widest at the base. The eighth sternite (fig. 5, δ) of the female is distinctive, being different from that of any other known female.

¹ H. H. Ross.—Studies of nearctic aquatic insects. I. Nearctic alder flies of the genus *Sialis* (Megaloptera, Sialidae). Illinois Natural History Survey Bul. 21, Art. 3, pp. 55-78, 1937.

Dr. H. H. Ross checked and approved all determinations used in this paper and to him the writer expresses sincere appreciation.

Male.—Length 12–14 mm. Black with the exception of certain head markings which are light orange. These markings are relatively constant but not absolutely so and are as follows: A narrow margin around each compound eye; one bar along each side of the meson and extending from the caudal margin of the head approximately half way to the antennal bases; behind each compound eye are several dots or broad, short bars, the last extending toward the caudal margin of the head; several dots are arranged each side of the meson on the vertex; between the bases of the antennae are several spots which may be confluent. These markings or similar ones probably occur in many species of the genus, the real distinguishing feature being the genitalia. Wings are dark brown.

General structure.—Head dull and coarse in appearance. Vertex concave slightly along meson. Pronotum dull and coarse with a transverse depression in the posterior region.

Abdomen and genitalia as in figs 1 to 4, and 6. Ninth sternite narrow, tapering to a point on each side as indicated in fig. 1. This sternite is produced ventrally in the midregion (figs. 2 and 6, 9). Lateral lobes (1) short and rather broad with apical margin produced and apex a blunt tooth. In some views the apex of each lateral plate appears to be slightly knobbed. Genital plate (g) situated below terminal plate (t) and of the shape indicated in fig. 4, g. The genital plate gives rise to a pair of long, bent arms (fig. 3, gh) which project forward toward the ninth sternite. The two arms are closely appressed, thicker at the base but have no expanded basal lobe. Terminal plate (fig. 2, t) with a small, angular incision at apex; the plate is broadest at the base, narrowing as indicated toward the apex.

Female.—Length 14 mm. Color and general structures as in male.

Abdomen and genitalia as in fig. 5. Seventh sternite wider than long as indicated in figure. Eighth sternite (8) is different from any that have been described for the genus. It is wide and short with a median shallow depression. Each side tapers laterally from the mesal region ending in a rounded apex. The appearance as indicated in the figure should serve to recognize the species.

Holotype, male.—Lexington, Kentucky, along North Elkhorn Creek: April 1, 1938, Paul O. Ritcher and Lee H. Townsend.

Allotype, female.—Same data as holotype.

Paratypes.—Eleven males. Same data as holotype.

Holotype and *allotype* deposited in U. S. National Museum. Cat. No. 53110.

Paratypes deposited as follows: one male, U. S. National Museum Cat. No. 53110; three males, Illinois State Natural History Survey, Urbana, Illinois; seven males, Kentucky Agricultural Experiment Station, Lexington.

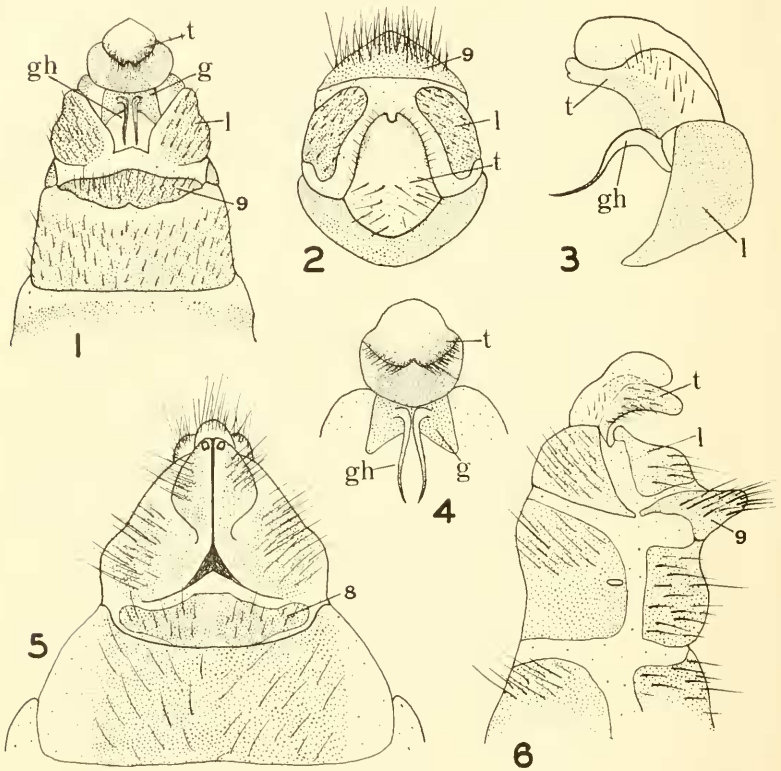
In addition to the above species the writer desires to record two additional species of *Sialis* from Kentucky as follows:

Sialis velata Ross, one male, Tyrone, Ky., April 22, 1893. H. Garman.

Sialis infumata Newman, one female, Henderson, Ky., April 19, 1938. Paul O. Ritcher.

Ross (l. c. p. 74) records one species from Kentucky as follows:

Sialis mohri Ross, two males, near Mammoth Cave, Ky., May 2, 1874.



EXPLANATION OF FIGURES.

All are figures of *Sialis nina*, n. sp.

1. Ventral aspect, terminal abdominal region of male.
2. Caudal aspect, terminal plate, lateral plates, and ninth sternite of male.
3. Lateral aspect, genital hook, terminal, and lateral plate.
4. Ventral aspect, apex of abdomen of male.
5. Ventral aspect, terminal abdominal region of female.
6. Left lateral aspect, terminal abdominal region of male.

Abbreviations.—g, genital plate; gh, genital hook; l, lateral plate; t, terminal plate; δ , eighth sternite; 9, ninth sternite.